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(56) Documents Cited

GB 2206106 A

EP 0305067 A2

(58) Field of Search

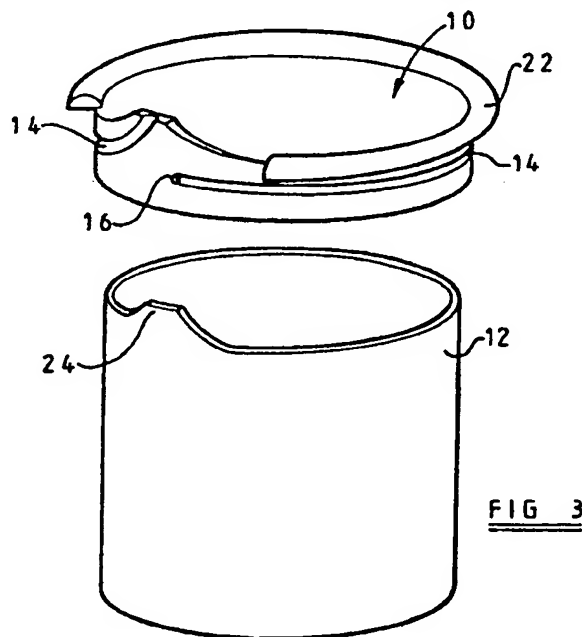
UK CL (Edition M) B8T TDAX TWJ

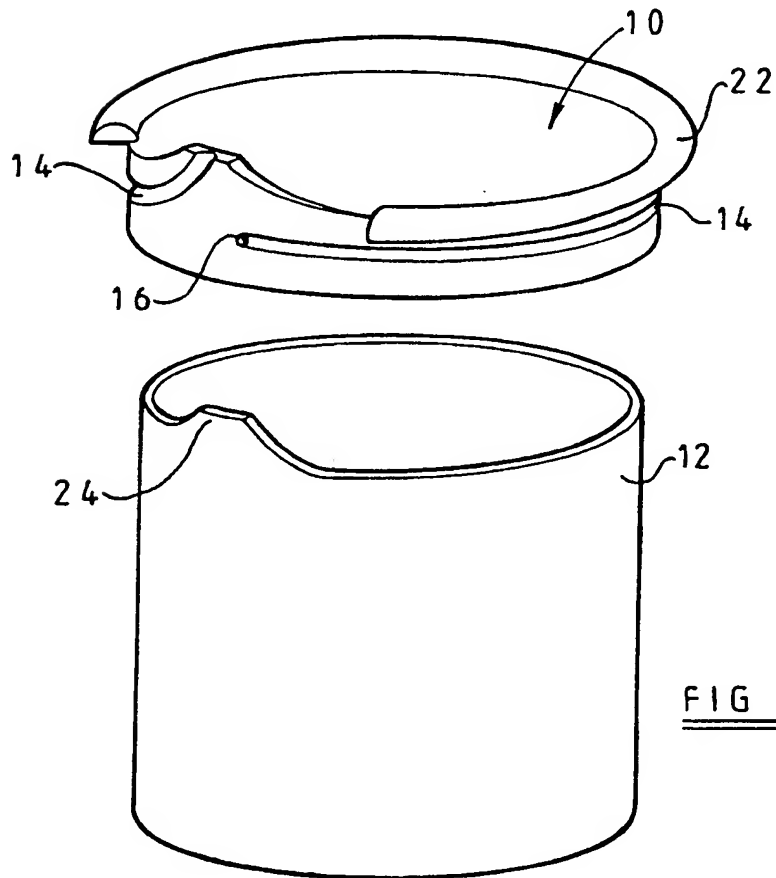
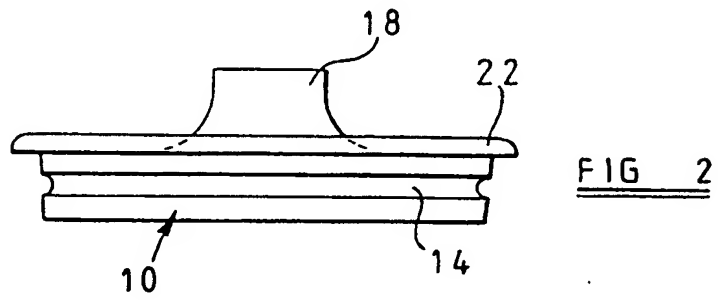
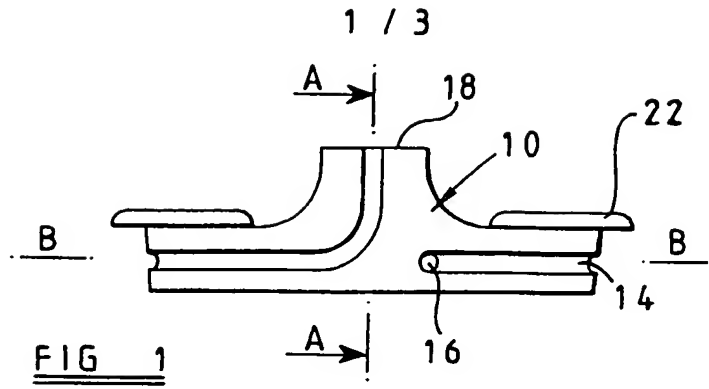
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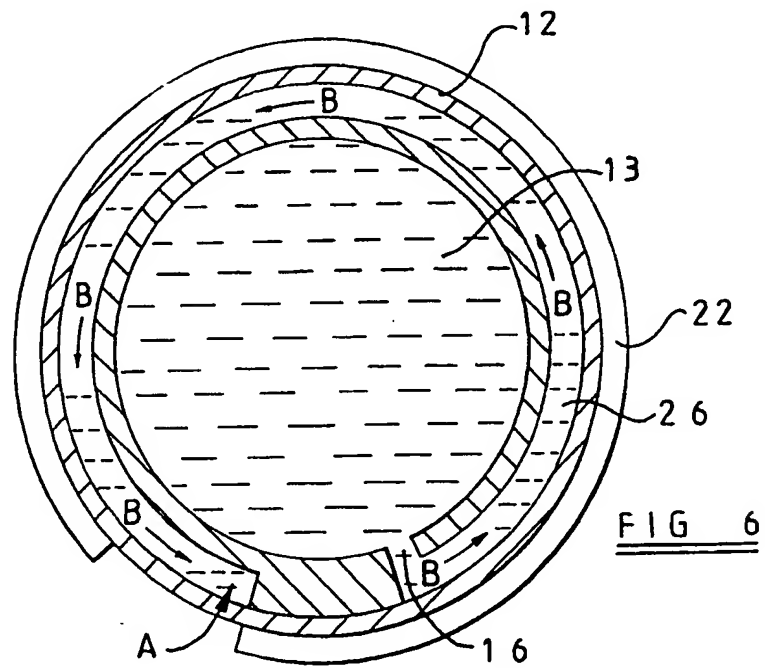
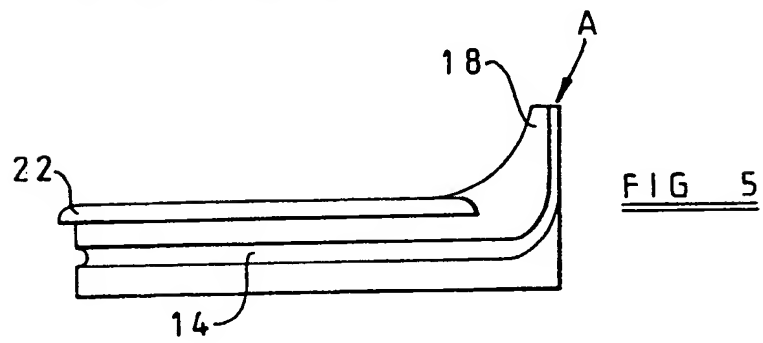
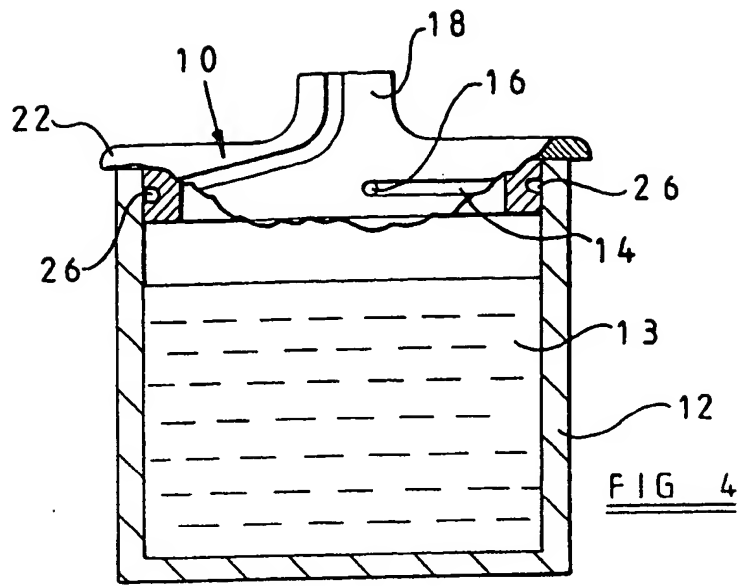
ONLINE DATABASES: WPI

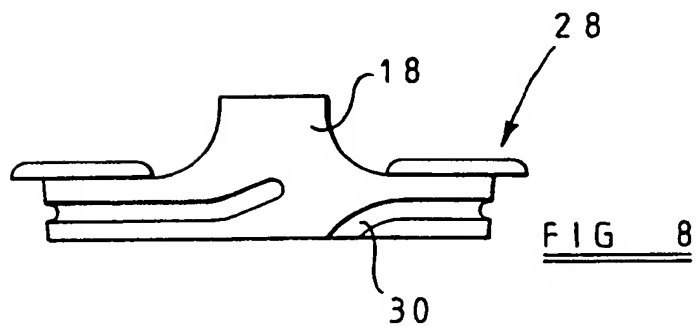
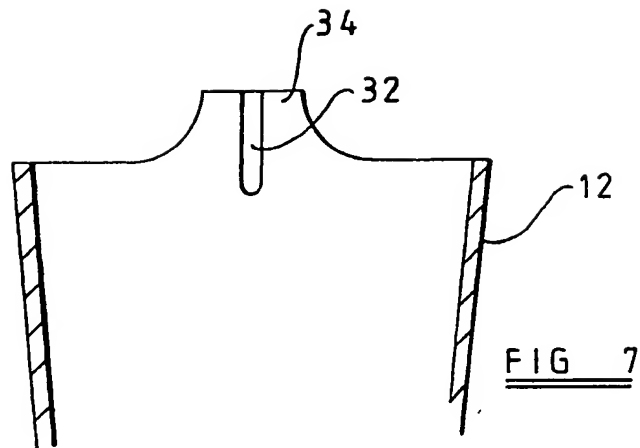
(54) Container and drinking lid

(57) A container (12) used to hold fluid and which is provided with a correspondingly shaped lid (10), the lid (10) being adapted so as to be releasably secured to the container (12) in order to maintain the fluid in that container and a groove (14) being provided between the lid (10) and container (12) which defines a sealed peripherally extending passageway (26) which has both an inlet (16) and outlet (18) for any fluid in the container. The container and lid may rotate relative to each other to an off-set point where the groove prevents intake of fluid into the passageway. The lid may include a mouth piece on which a child may suck.









FLUID CONTAINER

This invention relates to a container for holding fluid and in particular but not exclusively to a child's drink container.

5 Conventional drink containers for young children include a lid and usually incorporate a mouth-piece through which fluid held in the container is received by a child. The lids are known to prevent fluid spilling from the container as a child drinks from the mouth-piece, the
10 only fluid being allowed out of the container being that which exits through the mouth-piece. However, such containers do not prevent leakage of fluid from the container if, when the container is not in use, it is inverted or left accidentally on its side, because then
15 the fluid simply drains through the mouth-piece.

Such an occurrence as mentioned above is frequent as children of the age group for which such containers are designed are prone to knock over or play with their
20 drinks containers and therefore spillage of the drink in the container is very likely.

The present invention seeks to overcome the above-mentioned problems by providing a container and lid for holding fluid and suitable for use as a child's drink container which minimises the amount of fluid which can
25 escape from the container by the use of an integral straw-like mechanism which necessitates a child using such a container actually to suck on a mouth piece provided on the lid in order to allow fluid to exit from the container.

30 Accordingly the present invention provides a container for holding fluid and having a correspondingly shaped lid which is adapted to be releasably secured to the

container in order to retain the fluid therein, an interface between the lid and the container being provided with a groove which extends peripherally around the lid and which groove, when the lid is secured to the container, defines a sealed passageway having an inlet which communicates with fluid in the container and an outlet through which fluid exits the container.

Unlike a conventional straw in a drinks container the present container and lid have the advantage that a passageway is only defined when the lid and container are secured together thus forming an integral straw-like passageway. The lid may be secured inside the container or alternatively may overlap the container, but in either case the passageway is defined by the securing of the lid to the container. Consequently this passageway can be easily cleaned. A conventional straw is exceedingly difficult to clean to an extent that would enable it to be reusable and therefore re-used straws would be very unhygienic. However, the passageway defined when the lid and container are secured together can be cleaned thoroughly and is thus more hygienic and easily reusable.

Alternatively a groove is provided in a solid lid which groove communicates with the fluid in the container and a complimentary groove is provided in the container so that when the two grooves are aligned one with the other the fluid in the container may enter the sealed passageway and then exit the container. In such an arrangement it may be possible to rotate the lid and container one relative to the other to an off-set position where the groove in the lid and container are no longer aligned and therefore prevent intake of fluid into the passageway.

Preferably, the groove is provided peripherally in the lid and forms a sealed passageway when the lid and

container are secured together. This enables conventional containers to be used with lids which have been provided with a groove and also allows the container to be easily

5 maintained in a hygienic state, the lid being releasable and thus the groove being able to be cleaned with great ease.

10 It is also preferred that the groove should extend around substantially the entire periphery of the lid. As a result the fluid has to travel some distance before it can exit the container when the container is inverted or left on its side and consequently the likelihood of leakage is reduced further. Preferably the lid is also provided with a conventionally shaped mouth-piece which extends away from the lid and along which the groove
15 extends and through which a child sucking on the mouth-piece of the fluid container may receive fluid.

20 Preferably the lid of the container is made of flexible material in order to aid the intake of the fluid into the passageway and to ease any vacuum build up. Consequently the degree of sucking required by a child in order to obtain fluid from the container is reduced.

25 The lid of the container is desirably provided with a rim around substantially the entire periphery thereof which serves to ensure that the lid is not pushed too far into the container, preventing the groove from defining a passageway.

Two embodiments of the present invention will now be described in detail by way of example only and with reference to the accompanying drawings in which:-

30 Figure 1 is a diagrammatic side view of a lid of a container in accordance with a first embodiment of the

invention;

Figure 2 is a diagrammatic other side view of the lid shown in Figure 1;

5 Figure 3 is a diagrammatic perspective view of the container and lid in accordance with the first embodiment of the invention;

Figure 4 is a part diagrammatic sectional view of the lid secured to the container in accordance with the first embodiment of the invention;

10 Figure 5 is a diagrammatic side view of the lid in the direction line A-A;

Figure 6 is a diagrammatic sectional view through the horizontal line B-B.

15 Figure 7 is a diagrammatic sectional view through the container in accordance with a second embodiment of the invention; and

Figure 8 is a diagrammatic side view of the lid in accordance with the second embodiment of the invention.

20 Figure 1 and Figure 2 represent a hollow lid 10 in accordance with the invention to be secured to a container 12 shown in Figure 3. The lid 10 is provided with a groove 14 which commences at an opening 16 which extends through the lid 10, and extends around almost the entire periphery of the lid 10 and terminates in mouth-
25 piece 18 which extends away from the part of the lid 10 to be secured to the container 12. The lid 10 is also provided with a rim 22 which extends beyond the peripheral circumference of the lid 10 and which will serve to prevent the lid 10 being pushed too far into the

container 12.

Figure 3 represents a lid 10 and container 12 into which the lid 10 is to be secured. The container 12 is provided with a tongue 24 on its rim which corresponds in shape to the mouth-piece 18 on the lid 10.

Figure 4 shows the lid 10 and container 12 secured together, the container 12 being full with fluid 13. When the lid 10 is secured inside the container 12, the groove 14 in the lid 10 in combination with the container 12 defines a passageway 26, this passageway 26 running all the way around the periphery of the lid and terminating at the mouth-piece 18. The passageway 26 in the mouth-piece is provided by the combination of the groove 14 and the tongue 24.

Figure 5 is another side view of the lid 10 and represents the groove 14 which extends around the lid 10 and exits at a mouth-piece 18 as indicated by arrow A.

Figure 6 represents the passage of the liquid indicated by the arrows B in the container 12 when the container is in use. The liquid moves from the container 12 through the opening 16 around the passageway 26 and out through the passageway 26 provided in the mouth-piece 18 indicated by the arrow A. The liquid is sucked by a child using the container to enable it to travel around the passageway 26 to be received by the child. Once the child releases the mouth-piece 18 the liquid drains back down the passageway 26 and returns to the container 12. When the container 12 is inverted or left on its side the liquid must pass through the entire passageway 26 before any leakage will occur.

Figure 7 and Figure 8 represent a second embodiment of the invention (like parts being provided with like

reference numerals to the first embodiment) whereby solid lid is provided with a groove 30 which extends from the base of the lid 28 and then around the entire periphery of the lid terminating at the mouth piece 18. The

5 container 12 is provided on the inner wall of the tongue 24 with a groove 32 which is complementary to the groove 30 extending from the base of the lid 28. Thus, when the lid 28 is inserted into the container 12 the grooves 30 and 32 if in alignment one with another co-operate to

10 form a passageway 34 (not shown). This passageway 34 allows the fluid to flow from the container 12 through the passageway 34 and into the passageway 26. In order to prevent the flow of fluid from the container 12, the lid 28 is simply rotated relative to the container 12 so as

15 to move the grooves 30 and 32 out of alignment, thus providing a simple opening and closing mechanism.

When the container 12 is empty or requires cleaning the lid can simply be removed and the container 12 refilled or washed. The groove 14, or grooves 30 and 31, and

20 groove 32 in the container, can be thoroughly cleaned when the lid is removed thus ensuring on reuse that the passageway 26 or 34 defined by the container 12 and lid 10 or 28 is very clean and thus hygienic.

CLAIMS

1. A container for holding fluid and having a correspondingly shaped lid which is adapted to be releasably secured to the container in order to retain the fluid therein, an interface between the lid and the container being provided with a groove which extends peripherally around the lid and which groove, when the lid is secured to the container, defines a sealed passageway having an inlet which communicates with fluid in the container and an outlet through which fluid exits the container.
2. A container according to claim 1 in which the container and lid can rotate one relative to the other to an off-set point where the groove prevents intake of fluid into the passageway.
3. A container according to any of the preceding claims in which the groove is provided on the lid and forms a sealed passageway when the lid and container are secured together.
4. A container according to any of the preceding claims in which the groove extends around substantially the entire periphery of the lid and the outlet is provided in a mouth-piece which extends away from the lid.
5. A container according to any of the preceding claims in which the container is provided with a lid made of flexible material in order to aid the intake of fluid into the passageway and to ease any vacuum build up.
6. A container according to any of the preceding claims in which the lid is provided with a rim around substantially the entire periphery of the lid.

7. A container according to any of the preceding claims as hereinbefore described with reference to and as illustrated in the accompanying drawings.

Patents Act 1977**Examiner's report to the Comptroller under Section 17
(The Search report)**Application number
GB 9411102.8**Relevant Technical Fields**

(i) UK CI (Ed.M) B8T (TWJ, TDAX)

(ii) Int CI (Ed.5) A47G 19/22

Search Examiner
LINDA HARDENDate of completion of Search
4 JULY 1994**Databases (see below)**

(i) UK Patent Office collections of GB, EP, WO and US patent specifications.

(ii) ONLINE DATABASES: WPI

Documents considered relevant
following a search in respect of
Claims :-
1-7**Categories of documents**

X: Document indicating lack of novelty or of inventive step.

Y: Document indicating lack of inventive step if combined with
one or more other documents of the same category.A: Document indicating technological background and/or state
of the art.P: Document published on or after the declared priority date
but before the filing date of the present application.E: Patent document published on or after, but with priority date
earlier than, the filing date of the present application.

&: Member of the same patent family; corresponding document.

Category	Identity of document and relevant passages	Relevant to claim(s)
X	GB 2206106A (M BETKA) see in particular Figures 2 and 4	1,2,3,5,6
X	EP 0305067 A2 (HAYES) see Figures 5 and 6	1,4,6

Databases: The UK Patent Office database comprises classified collections of GB, EP, WO and US patent specifications as outlined periodically in the Official Journal (Patents). The on-line databases considered for search are also listed periodically in the Official Journal (Patents).